

COMPLETE LISTING OF CLAIMS
IN ASCENDING ORDER WITH STATUS INDICATOR

Claims 1-17 (canceled)

Claim 18 (currently amended): A substrate processing apparatus ~~according to claim 10,~~
for processing at least a substrate to be processed held in a processing vessel with a processing gas
and a solvent vapor fed to the substrate, the apparatus comprising:

a processing gas feed system for feeding the processing gas into the processing vessel;
a solvent vapor feed system for feeding the solvent vapor into the processing vessel;
a nitrogen gas feed pipe for feeding nitrogen gas into the processing vessel, wherein a
nitrogen gas flow rate control valve is inserted in said nitrogen gas feed pipe; and
a central controller for controlling the feed of the processing gas and the solvent vapor to be
fed into the processing vessel, said central controller controlling the flow rate of nitrogen gas
flowing through said nitrogen gas feed pipe so as to feed nitrogen gas, the processing gas and the
solvent vapor to remove a resist on the substrate to be processed and etch a metal on the substrate-
to-be-processed, and controlling the flow rate of nitrogen gas flowing through said nitrogen gas feed
pipe so as to feed the processing gas and the solvent vapor to remove a resist on the substrate-to-be-
processed but not etch a metal on the substrate-to-be-processed,

wherein said central controller controls said processing gas feed system to feed the processing gas into the processing vessel to pre-pressurize the interior of the processing vessel before processing the substrate-to-be-processed and controls said processing gas feed system and said solvent vapor feed system to feed the processing gas and the solvent vapor respectively into the processing vessel to process the substrate-to-be-processed.

Claim 19 (currently amended): ~~A substrate processing apparatus according to claim 10,~~
comprising for processing at least a substrate to be processed held in a processing vessel with a
processing gas and a solvent vapor fed to the substrate, the apparatus comprising:

a processing gas feed system for feeding the processing gas into the processing vessel;

a solvent vapor feed system for feeding the solvent vapor into the processing vessel;

a nitrogen gas feed pipe for feeding nitrogen gas into the processing vessel, wherein a
nitrogen gas flow rate control valve is inserted in said nitrogen gas feed pipe;

a central controller for controlling the feed of the processing gas and the solvent vapor to be
fed into the processing vessel;

a forced exhaust mechanism for forcibly discharging an atmosphere in the processing vessel;

a cooling unit disposed downstream of the forced exhaust mechanism for cooling and
condensing at least the fluid discharged from the forced exhaust mechanism;

a mist trap disposed downstream of the cooling unit for separating the fluid from the cooling
unit into gas and liquid; and

an apparatus disposed downstream of the mist trap for making the gas from the mist trap
harmless,

wherein said central controller controls the flow rate of nitrogen gas flowing through said
nitrogen gas feed pipe so as to feed nitrogen gas, the processing gas and the solvent vapor to remove
a resist on the substrate to be processed and etch a metal on the substrate-to-be-processed, and
controls the flow rate of nitrogen gas flowing through said nitrogen gas feed pipe so as to feed the
processing gas and the solvent vapor to remove a resist on the substrate-to-be-processed but not etch
a metal on the substrate-to-be-processed.

Claim 20 (currently amended): A substrate processing apparatus ~~according to claim 15,~~
for processing at least a substrate to be processed held in a processing vessel with ozone gas and
steam fed to the substrate, the apparatus comprising:

an ozone generator for generating ozone gas;
an ozone gas feed pipe interconnecting the ozone gas generator and the processing vessel;
a steam feed pipe for feeding steam into the processing vessel; and
a central controller for controlling the feed of ozone gas and steam to be fed into the
processing vessel,

wherein the ozone gas generator is connected to a nitrogen gas feed pipe having a nitrogen
gas flow rate control valve and is connected to an oxygen feed pipe for feeding oxygen, the central
controller controlling the flow rate of nitrogen gas flowing through said nitrogen gas feed pipe so as
to feed oxygen and nitrogen to the ozone generator to remove a resist on the substrate-to-be-
processed and etch a metal on the substrate-to-be-processed, and controlling the flow rate of
nitrogen gas flowing through said nitrogen gas feed pipe so as to feed oxygen to the ozone generator
to remove a resist on the substrate-to-be-processed but not to etch a metal on the substrate-to-be-
processed, and

wherein said central controller controls the feed of ozone gas to pre-pressurize the interior of
the processing vessel by feeding ozone gas into the processing vessel before processing the
substrate-to-be-processed and controls the feed of ozone gas and steam to process the substrate-to-
be-processed by feeding ozone gas and steam into the processing vessel.

Claim 21 (currently amended): ~~A substrate processing apparatus according to claim 15, comprising for processing at least a substrate-to-be-processed held in a processing vessel with ozone gas and steam fed to the substrate, the apparatus comprising:~~

an ozone generator for generating ozone gas;

an ozone gas feed pipe interconnecting the ozone gas generator and the processing vessel;

a steam feed pipe for feeding steam into the processing vessel;

a central controller for controlling the feed of ozone gas and steam to be fed into the processing vessel;

a forced exhaust mechanism for forcibly discharging an atmosphere in the processing vessel;

a cooling unit disposed downstream of the forced exhaust mechanism for cooling and condensing at least the fluid discharged from the forced exhaust mechanism;

a mist trap disposed downstream of the cooling unit for separating the fluid from the cooling unit into gas and liquid; and

an ozone killer disposed downstream of the mist trap for removing ozone from the gas of the mist trap,

wherein the ozone gas generator is connected to a nitrogen gas feed pipe having a nitrogen gas flow rate control valve and is connected to an oxygen feed pipe for feeding oxygen, the central controller controlling the flow rate of nitrogen gas flowing through said nitrogen gas feed pipe so as to feed oxygen and nitrogen to the ozone generator to remove a resist on the substrate-to-be-processed and etch a metal on the substrate-to-be-processed, and controlling the flow rate of nitrogen gas flowing through said nitrogen gas feed pipe so as to feed oxygen to the ozone generator to remove a resist on the substrate-to-be-processed but not to etch a metal on the substrate-to-be-processed.